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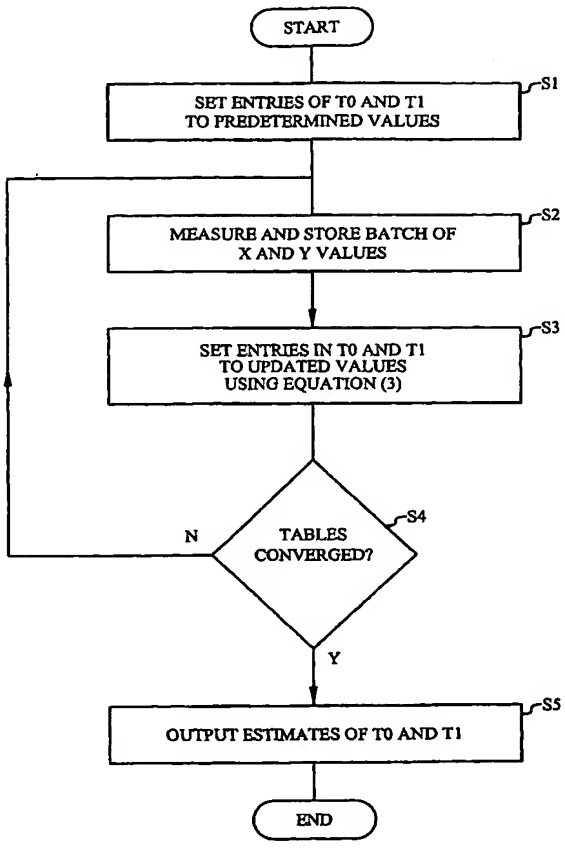
(54) Title: POWER AMPLIFIER PRE-DISTORTER TRAINING



(57) Abstract: A power amplifier pre-distorter is formed by a FIR filter structure which includes an individual look-up table for each filter tap, where each look-up table represents a sample polynomial in a variable representing signal amplitude, and means for selecting, from each filter tap look-up table, a filter coefficient that depends on the amplitude of corresponding complex signal value to be multiplied by the filter tap. A training method for such a pre-distorter sets (S1) the entries of table T_0 and T_1 to predetermined values. Then it measures and stores (S2) a batch of input signals x and feedback signals y. New estimates of T_0 and T_1 are determined (S3) using an iteration of a least mean square based iterative procedure. Then it is tested (S4) whether the tables have converged. If the tables have converged, the current estimates are provided as the final tables. Otherwise another iteration (S2-S4) of the least mean square procedure is performed.

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